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ABSTRACT

Publication credit has taken on great significance with the advent of an increasingly competitive academic job market and the decline in federal funds for psychological research. Policies regarding assignment of publication credit help to mold the careers of academic psychologists. A sample of psychologists was asked to endorse what they considered to be the most appropriate solution to each of several hypothetical collaborative publication situations. Indications were that authorship should be awarded on the basis of scholarly contribution, with a general rank ordering as follows: research design, report writing, data analysis, and data collection. Neither the status nor the gender of the researcher in the hypothetical situations influenced the assignment of publication credit. (Author/CS)

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Assigning Publication Credit in Collaborative Research

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Scholarly productivity has often been used as an index of professional competency among academic psychologists. Publication credit takes on even greater significance with the advent of an increasingly competitive academic job market (Gottfredson & Swatko, 1979; Kiesler, 1979), and a decline in federal monies available for psychological research (Kiesler, 1978; Wertheimer, Barclay, Cook, Kiesler, Koch, Reigel, Rorer, Smith & Sperling, 1978). Since most investigations in psychology are of a collaborative nature, policies regarding the assignment of publication credit are of some importance in molding the career opportunities of freshman and veteran psychologists alike.

The APA principle guiding the assignment of publication credit is as follows:

> Major contributions of a professional character made by several persons to a common project are recognized by joint authorship, with the experimenter or author who made the principal contribution identified and listed first. Minor contributions of a professional character, extensive clerical or similar nonprofessional assistance, and other minor contributions are acknowledged in footnotes or in an introductory statement. Acknowledgement through specific citations is made for unpublished as well as published material that has directly influenced the research or writing (APA, 1977, p.5).

Clearly, the guidelines leave several issues unanswered. Specifically, what activities constitute "major" contribution thereby deserving authorship? What distinguishes a "major" contribution from the "principal" contribution? And a "major" contribution from a "minor" one? In practice, these distinctions are simply unclear, and operationalizing them can be problematic to researchers in collaborative positions.

The provision of more explicit interpretative guidelines was first attempted by Spiegel and Keith-Spiegel (1970). A sample of VA psychologists

and APA members and associates responded to a questionnaire regarding the assignment of publication credit in a series of hypothetical collaborative situations. Using a multiple choice format, the psychologists were asked to endorse what they considered to be the most appropriate solution to each situation. A modal response pattern provided tentative guidelines which were intended to aid researchers in interpreting the APA principle.

While the Spiegel & Keith-Spiegel study was instrumental in clarifying some publication credit issues, the authorship controversy is still alive and well. The APA Ethics Committee is currently receiving increasing numbers of inquiries and complaints regarding authorship credit. Those who turn to APA for general authorship information are provided with the Spiegel & Keith-Spiegel study. The committee serves a consultative role for psychologists requesting opinions on specific authorship problems. However, a full year may be required for a formal committee opinion. The Spiegel and Keith-Spiegel study, therefore, continues to provide an educational function for psychologists desiring immediate information about authorship issues.

In light of the continued interest in this issue, we recently conducted a partial replication of the Spiegel & Keith-Spiegel study in an effort to update attitudes on authorship assignment. The present study was also geared exclusively toward academic psychologists, since we wanted information based on the experiences of those who frequently encountered authorship decisions.

Method

Subjects

Questionnaires were mailed in bulk to the chairpersons of 40 randomly

selected doctoral-level programs in psychology. Chairpersons distributed the questionnaires to all full-time faculty on their staffs. Confidentiality was maintained, since respondents mailed the materials back to us individually.

Questionnaire Format

Each subject received a cover letter, information sheet and publication credit questionnaire. The cover letter simply stated the purpose of the present research, while the information sheet requested the following: 1) gender 2) year in which highest degree was earned 3) specialty area 4) level of university appointment, and 5) number of publications during the past two years, and over the course of the respondent's professional career.

The publication credit questionnaire consisted of 21 vignettes describing collaborative situations which would be likely to occur in an academic setting (e.g. paid and unpaid assistants, research teams involving a professor and several graduate students of varying experience, and so on). Fourteen of the 21 vignettes were identical to, or paralleled items used in the Spiegel & Keith-Spiegel study.[1]

Finally, there was an experimental manipulation which varied the gender of the major character within each vignette across two parallel forms of the questionnaire. While all faculty within a particular department received the same questionnaire, distribut of parallel forms was randomly manipulated across departments.

Results and Discussion

Subject Characteristics

Of the 948 questionnaires distributed, completed forms were received from 261 respondents, yielding a return rate of 27.5%. Time limitations prevent a thorough report of all subject characteristics. However, it should be note

that no systematic biases in subject characteristics were present. There were several interactions between certain respondent characteristics and options endorsed within particular items. There were no discernible patterns, however.

Analysis of Questionnaire Forms

As mentioned earlier, two parallel forms of the questionnaire were distributed, varying only in the gender of the main character in alternate vignettes. An almost equal number of each form was received (50.8% Form A, 49.2% Form B). The gender manipulation yielded insignificant results for all subjects, suggesting that a researcher's gender had no bearing on the evaluation of his/her contribution to a research project. All further discussion thus involves a collapse across forms.

Questionnaire Items

A majority of respondents agreed upon solutions for most of the situations, with ten vignettes yielding solutions which were endorsed by 70% or more of those surveyed. Seven of these ten vignettes were identical or similar to items from the Spiegel and Keith-Spiegel study. Similar modal response patterns emerged in these situations, indicating a consistency in psychologists' opinion over the past decade.

The modal response pattern across items helped to clarify what psychologists interpret as principal, major, and minor contributions to a research project. Research design and report writing were consistently placed at the apex of the pyramid in terms of the recognition they deserve. All else being equal, design was considered most worthy of senior authorship, followed by the writing of the final report. Even in cases where design was the sole

contribution, coauthorship was considered appropriate.

This policy implies that contributions should be evaluated with regard to their scholarly and conceptual importance, rather than by the time and energy invested in absolute terms. Experimental design is rarely the most time consuming aspect of research, but it is often the activity most dependent on a person's competence as a scholar and his/her cumulative familiarity with the area under investigation. Likewise, the writing process may not always be time consuming, but it does require a thorough understanding of all stages of a study, as well as an expressive skill presumably developed through experience.

Whether data analysis should be considered a "major" or a "minor" contribution was dependent on the competency of the individual involved, and his/her ability to function independently. In cases where one's only contribution was data analysis performed under close supervision, footnote credit was the appropriate recognition. Authorship was awarded to individuals who were in charge of the analysis, and wrote even part of the results section. Thus, the deciding variables appeared to be the professional competency of the data analyst, and at least some responsibility for writing part of the final report.

Respondents agreed with APA guidelines in recognizing data collection and tabulation as minor contributions. This was true regardless of the professional competency of the person, or whether that individual was paid or unpaid. Even in cases where data collection was very time consuming, or was of a professional nature (e.g. projective testing and interpretation), footnote credit was deemed most appropriate. Other activities deserving of footnote credit only were: supervising data analysis, contributing to

a research idea without being involved in the project itself; testing, both specialized and non-specialized; designing and building equipment; interviewing subjects; serving as administratively responsible investogator with no other functions; literature search, running subjects; and archival data collection.

Respondents were fairly consistent in evaluating research activities on the basis of their merit, rather than being influenced by ancillary characteristics of the contributer. The status of the researcher (e.g. undergraduate, graduate, or professor), and whether that person was paid or unpaid was generally disregarded in the determination of publication credit and authorship order. It was also agreed that academic advisors, paid consultants, or well-known psychologists acting primarily as administrative overseers should not receive authorship credit unless they are substantially and actively involved in the design of the project, or writing the research report. Finally, it is important to note that the gender of the major character did not influence appropriate authorship assignment.

Although the present study and the Spiegel & Keith-Spiegel research are not directly comparable due to sampling differences and questionnaire modifications, there was a striking similarity in response patterns between like items. The working environment of the research psychologist has changed markedly over the past decade, characterized by increased academic job competitiveness at the entry level, increased competitiveness for journal publication, a decrease in federal monies available for research, and more limited opportunities for lateral mobility between universities. On an *apriori* basis, these conditions would seem to produce more stringent

standards for publication credit for those in a position to make authorship decisions in collaborative research. Restricting the number of authors on a research report increases the visibility of the senior and coauthors, and strengthens the assumed contribution of each author. Thus, it is encouraging to see that despite the increasing significance of the publish-or-perish syndrome, the interpretation (and ideally, the application) of ethical standards to publication credit issues has remained fairly consistent over the last decade.

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Footnotes

[1] We would like to thank Don Spiegel and Patricia Keith-Spiegel for the use of items from their publication credit questionnaire.